

REMARKS/ARGUMENTS

Claims 1-57 stand rejected in the outstanding Official Action. Applicant has cancelled without prejudice claims 6-8, 11, 25-27, 30, 44-46 and 49 and amended claims 1, 9, 10, 12-16, 20, 28, 32-35, 39, 47 and 54-54. Therefore, claims 1-5, 9, 10, 12-24, 28, 29, 31-43, 47, 48 and 50-57 are the only claims remaining in this application.

The Examiner's acknowledgment of Applicant's claim for priority and receipt of the certified copy of the priority document is very much appreciated. Similarly, the Examiner's certification that the previously filed formal drawings meet Patent Office requirements is appreciated. Finally, the Examiner's consideration of the prior art noted in Applicant's previously submitted Information Disclosure Statement is appreciated.

The Examiner objects to the title of the invention as being too general. The Examiner has suggested a title, but this title is believed to be limited only to a method claim and the present application includes both method, apparatus and computer program product claims. However, Applicant has amended the title to read "PERFORMANCE CONTROLLING PARAMETER SETTING IN AN IMAGE PROCESSING SYSTEM" which is believed to be descriptive of the claimed invention.

The Examiner objects to claims 14, 33 and 52, alleging that there is no clear support or antecedent basis in the claims for the "estimator" and "group." Applicant has amended claims 14, 33 and 52 to specify "wherein said complexity measure is calculated in dependence upon those ones of a group of graphics processing features that are enabled for said image field or frame." This amendment is believed to provide clear antecedent basis for the objected to terms and any further objection thereto is respectfully traversed. It is also noted that there is

clear unambiguous support for this subject matter in Applicant's description, pages 1-5 and line 14, as well as page 12, line 29 to page 13, line 1.

In section 5 on page 3 of the Official Action, the Examiner objects to the phrase "comprises one of an image field and image frame." While Applicant believes this to be completely proper claim language, the Examiner's suggested amendment has been adopted, i.e., amended to read "comprises one of an image field or an image frame." The objection to the dependency of claim 8 and claim 46 has been obviated by their cancellation. Therefore, there is no further objectionable basis to the pending claims and any further objection thereto is respectfully traversed.

Claims 20-38 stand rejected under 35 USC §101 as allegedly being directed to non-statutory subject matter. While the allegation of non-statutory subject matter is respectfully traversed on the basis that 35 USC §101 specifies "any new and useful process, machine, manufacture, or composition of matter." A "computer program" comprises a "new and useful process" as well as a new and useful "machine" when implemented on a computer, and as such, these claims should be permissible under the statute. However, the above claims have been amended to recite a computer program product comprising a "computer readable storage medium." Patent Office practice has held for the last several years that the recitation of a computer readable storage medium is sufficient recitation of structure to overcome the alleged non-statutory subject matter rejection. Accordingly, amended claims 20-38 clearly meet the requirements of 35 USC §101 and any further rejection thereunder is respectfully traversed.

Claims 1-6, 17, 18, 20-25, 36, 37, 39-44, 55 and 56 stand rejected under 35 USC §102(b) as being anticipated by Ogoro (GB 2 345 774). Applicant's independent claims have been

amended to incorporate the subject matter of a number of dependent claims, i.e., claim 1 includes the subject matter of claims 6-8 and 11, claim 20 incorporates the subject matter of claims 25-27 and 30 and claim 39 includes the subject matter of claims 44-46 and 49. Accordingly, the inclusion in the independent claims of the subject matter from dependent claims not alleged to be anticipated by Ogoro obviates any further rejection of the independent claims over the Ogoro reference and any further rejection thereunder is respectfully traversed.

Similarly, in section 11, page 9 of the Official Action, claims 19, 38 and 57 stand rejected under 35 USC §103 over the Ogoro and Gawne (U.S. Patent 5,420,787) combination. However, previous claim 19 did not include the limitations of the dependent claims now included in independent claims 1, 20 and 39 and therefore the rejection over the Ogoro/Gawne combination is respectfully traversed.

On page 10, section 12 of the Official Action, the Examiner rejects the dependent claims which have been incorporated into the independent claims, e.g., the subject matter of claims 7 and 8 has now been incorporated into the independent claims 1, 20 and 39. The Examiner references paragraph 111 and 113 in the Kim reference as support for his rejection of the claims noted in section 12 over the combination of Ogoro and Kim (U.S. Publication 2003/003128). The “complexity measure” described in the cited paragraphs of Kim is utilized for a completely different purpose than the complexity measure of claim 1.

Kim’s complexity measure is used to perform bit allocation in a two-path encoding process that takes into account spatial and temporal complexity. Kim neither discloses nor suggests the use of any complexity measure for the purpose of setting a performance controlling parameter of a data processing apparatus. Quite obviously, the “complexity measure” in Kim

would not have any similarity to the “complexity measure” for setting a performance controlling parameter in a data processing apparatus.

On page 12, section 13, claims 9, 13, 28, 32, 47 and 51 stand rejected over the Ogoro/Kim combination as previously applied, further in view of Jeddeloh (U.S. Patent 6,252,612). The dependency of claims 9 and 13 have been amended to depend from amended claim 1 with similar amendments to the other cited dependent claims. There is believed no disclosure in the Ogoro, Kim and Jeddeloh references supporting an obviousness rejection of the independent claims 1, 20 and 39 or any reason or motivation for combining these references. Accordingly, any further rejection thereunder is respectfully traversed.

In section 14 on page 13 of the Official Action, dependent claims 11, 30 and 49 are suggested as being obvious over the combination of Ogoro and Kim, further in view of Lavelle (U.S. Publication 2003/0179208). Here, it is noted that the subject matter of claims 11, 30 and 49 has been incorporated into independent claims 1, 20 and 39. Furthermore, the Examiner is believed to be utilizing impermissible hindsight in his argument that a skilled person would combine various portions of the Kim, Ogoro and Lavelle references in order to arrive at the subject matter of amended claim 1 which incorporates claim 11.

It is noted that Lavelle is directed to a completely different problem of providing a graphical computing system capable of maintaining a target sample density despite variations in a display window size (see Lavelle paragraph 5). Kim is directed to a different problem of providing an encoding/decoding method. Because Ogoro, Kim and Lavelle do not really suggest any common problem or any combination of elements to solve that problem, the rejection has not been properly established and therefore any further rejection thereunder is respectfully traversed.

The inventors of the present invention recognized that in data processing systems having deferred-rendering graphics processors a display list for a given image scene is typically created prior to rendering the scene in hardware. As a result the apparatus typically has information indicative of the complexity of a given image scene in advance of rendering that scene. The inventors recognised that the “count of constituent image items in said image rendering display list” is a simple parameter to derive from image lists generated by deferred rendering graphics processors, yet provides a reliable estimate of processing work associated with rendering of a field or frame (as acknowledged at the end of the first paragraph on page 6 of the description). Although the count of constituent image elements is readily obtained for a deferred-rendering graphics processor, this count would not be as easy to determine in a traditional immediate-mode renderer because, in that case, processing is started immediately, rather than deferring until all constituent elements of a frame are ready to be rendered. Accordingly, starting from a knowledge of the operation of the commonplace immediate-mode renderer, it would not be obvious to the skilled person to instead deploy a deferred-mode renderer and to use a count of constituent image elements to derive a complexity measure for controlling a performance parameter of a data processing apparatus.

Finally, with respect to all obviousness rejections based upon the Kim reference, it is submitted that Kim actually would lead one of ordinary skill in the art away from Applicant’s claimed combination. The present invention uses as the count of constituent image items a quantity that varies dynamically from frame to frame or field to field and thus provides a suitable complexity measure from which to predict the performance controlling parameter of the data processing apparatus on a block-by-block basis. In Kim, the texture bit count disclosed in paragraph 113 is a more static quantity that does not change to any great extent from frame to

frame. Since the system of Kim teaches that the texture bit count is chosen since it varies with a change in the quantization parameter and this reflects the fact that Kim is directed to a different purpose of determining a complexity measure for guidance of an encoding/decoding processing, Kim would actually lead away from Applicant's claimed invention.

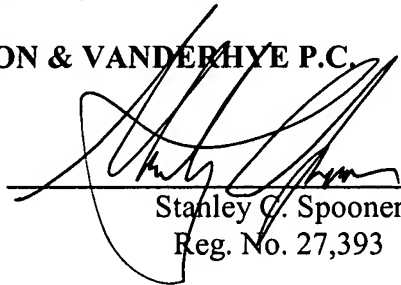
In view of the above, there is simply no *prima facie* basis of obviousness based upon the Ogoro/Kim combination or any other combination involving the Kim reference and therefore any further rejection thereunder is respectfully traversed.

Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that remaining claims 1-5, 9, 10, 12-24, 28, 29, 31-43, 47, 48 and 50-57 are in condition for allowance and notice to that effect is respectfully solicited. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, he is respectfully requested to contact Applicant's undersigned representative.

Respectfully submitted,

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